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EVALUATION OF WOMEN'S BELIEFS ABOUT PAP SMEAR SCREENING USING THE HEALTH BELIEF MODEL SCALE

KADINLARIN PAP SMEAR TARAMASINA İLİŞKİN İNANÇLARININ SAĞLIK İNANÇ MODELİ ÖLÇEĞİ İLE DEĞERLENDİRİLMESİ

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ABSTRACT

Objective: To evaluate women's beliefs about screening Pap smear test.

Material and Method: The survey has been conducted through a questionnaire prepared by researchers, based on the Health Belief Model Scale for the Pap smear test. The participants consisted of 266 women between 18-70 years of age registered at a Family Health Center in Izmir. Their beliefs about screening Pap smear test were evaluated using the Health Belief Model Scale.

Results: The mean age of first sexual intercourse was 21.67±4.5 (min:13--max:45 years), 86.5% reported a single partner and 41.0% of them (n=109) had never undergone a Pap smear test. Women who previously had a Pap smear test had high scores of sensitivity, seriousness, advantage and motivation, health motivation subscales, but the mean scores for obstacles were low. There was a difference between seriousness, health motivation subscales and taking the Pap smear test (p=0.021, p=0.006). The Mean scores of seriousness and health motivation of Health Belief Model Scale were higher. There was no difference between education level, working status and undergoing a Pap test (p>0.05).

Conclusion: Having a Pap smear test is still moderately frequent and there are obstacles. Planning the interventions to eliminate Pap smear test barriers is an important issue for family physicians.

Keywords: Health behaviour, health belief, cervical smear

ÖZET

Amaç: Bu çalışmanın amacı kadınların Pap smear test taramasına ilişkin inançlarını değerlendirmektir.

Gereç ve Yöntem: Araştırma, araştırmacı tarafından geliştirilen Pap smear testi için Sağlık İnanç Modeli Ölçeğini içeren bir anket aracılığıyla gerçekleştirilmiştir. Katılımcılar, İzmir'de bir Aile Sağlığı Merkezi'ne kayıtlı 18-70 yaş arası 266 kadındı. Pap smear testi taramasına ilişkin inançları Sağlık İnanç Modeli Ölçeği kullanılarak değerlendirildi.

Bulgular: Ortalama ilk cinsel ilişki yaşı 21,67±4,5 (min:13-maks:45 yıl) idi, %86,5'i tek partner olduğunu ve %41,0'ı (n=109) hiç Pap smear testi yaptırmadığını ifade etti. Daha önce Pap smear testi yapılmış kadınların hassasiyet, ciddiyet, avantaj ve motivasyon, sağlık motivasyonu alt ölçek puanları yüksekti, ancak engeller ortalama puanları düşüktü. Ciddilik, sağlık motivasyonu alt ölçekleri ile Pap smear testi yapılması arasında fark vardı (p=0,021, p=0,006), Sağlık İnanç Modeli Ölçeği'nin ciddiyet ve sağlık motivasyonu puanları ortalamaları daha yüksekti (p<0,05). Eğitim düzeyi, çalışma durumu ve Pap testi yaptırmak arasında fark yoktu (p>0,05).

Sonuç: Pap smear testi yaptırma durumu halen orta düzeydedir ve engeller bulunmaktadır. Aile hekimleri için Pap smear testini engelleyen nedenlerin ortadan kaldırılması için girişimlerin planlanması önemli bir konudur.

Anahtar Kelimeler: Sağlık davranışı, sağlık inanışları, servikal smear

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INTRODUCTION

Cervical cancer is one of the most common cancer types in the world and ranks fourth among the causes of death (1). In 2012, worldwide more than five hundred thousand cases of cervical cancer were newly diagnosed. According to the 2009 statistics, the cervical cancer rate is 4.5 per 100,000 women in Turkey (2).

Cervical cancer incidence increases after the age of 40. Besides age, the other risk factors in the development of such cancer types are gene mutations, family breast/cervical cancer history, extension in the interval between menarche and menopause, and obesity. Less serious risk factors are first sexual intercourse under the age of 16, sexually transmitted disease history of HIV, HSV-2, genital wart, HPV, high parity, smoking, lower socioeconomic level, and use of oral contraceptives (3, 4).

Screening is a public health intervention provided to prevent disease development in a healthy target population. In screening, the aim is not only to find and reveal those who are sick but also to identify individuals who are likely to have the disease itself or a precursor. The most important and primary definite outcome of cervical screening is the decline of cervical cancer by the detection and treatment of cases of pre-cancer. Additionally, screening can discover the existence of cervical cancer at an early stage and increases the chances of successful treatment (5). Both breast and cervical cancers can be prevented by early diagnosis and screening programs. Besides early diagnosis and screening, it is essential to create awareness and behavioral change in society by increasing the knowledge of causes, risk factors, and symptoms. Incidences of cancer can be reduced by raising awareness of risk factors such as smoking and alcohol use, inadequate physical activity, excessive weight and amount of fat, inadequate consumption of vegetables and fruits, and Human Papilloma Virus history (6, 7).

According to the National Cancer Control Program, quinquennial Pap smear test among 30-65 years olds constitutes the early detection, diagnosis and screening method for cervical cancer (8, 9). The Pap smear test, a screening method for the early diagnosis of cervical cancer, is a part of women's healthy lifestyle and lifestyle behaviors, and increases awareness of early diagnosis and practices. These behaviors have a very important role in decreasing the number of cases, late diagnosis ratios, and boosting cancer prevention (10). Similar to developing countries, national studies show that screening frequencies are not yet at the desired levels, the regular screening rate was 39.2% in accordance with the national screening standard (11-14). Negative attitudes towards health protection are caused by misguided attitudes and beliefs (such as the belief that a healthy lifestyle and diet, and no family history of cancer means low risk) and such beliefs determine whether or not the Pap smear test is conducted (11, 15-17). Creating awareness about the importance of early detection is a way of encouraging women to participate in screening, which is easily done by Pap smears. Most people, however, only apply for health care when they detect a symptom. This process relies on two factors. First, patients need to identify that they have a symptom, and conclude that health professionals will be able to help health-seeking behavior. Second, this process relies upon an illness having detectable symptoms, as cancer does. Screening programs are valuable as a mean to detect signs at a time when they may not be visible to the patient, on the premise that early detection leads to better treatment success.

Considering this, it is essential to understand individuals' perceptions regarding health needs, their obstacles, decisions processes and behaviors. The Health Belief Model is often used to serve this purpose. The model consists of five main structures: perceived sensitivity, perceived seriousness, perceived advantage/motivation, health motivation and perceived obstacles. The model not only explains the screening behaviors, but also the factors that facilitate patient behaviors, patient role behaviors, and performing health behaviors (18).

Healthcare professionals should understand how cultural values and beliefs affect screening practices, and to develop programs using culturally suitable messages and convenient strategies.

In this regard, the aim was to find out which factors encourage women to take a Pap smear, and the relation between the various attitudes and belief regarding Pap smear test of patients registered with a Family Health Center.

MATERIAL AND METHOD

This cross-sectional and descriptive research was carried out to determine the knowledge, attitudes, and behaviors of 18 to 70 years old women towards cervical cancer. The participants were 266 women registered with a Family Health Center in Izmir between June-September 2015. Demographical data were collected face-to-face using questions from Cervical and Pap Smear Test Health Belief Model Scale. Data were analyzed using the SPSS 15.0 program. The Mean, standard deviation and percentage was used to evaluate participants' sociodemographic characteristics of participants. Chi-square and student's t-test were used, $p<0.05$ was accepted as significant. Approval for the study was obtained from Izmir Public Health Directorate Approvals and Dokuz Eylül University Faculty of Medicine Ethics Committee.

Data collection tool: Champion developed this scale for breast cancer and mammography, and adapted Cervical Cancer and Pap smear test. This model was validated in various other countries (19). Guvenc et al. conducted the Turkish validity and reliability study (11). The scale consists of 35 items, and five main dimensions: sensitivity (3 items), seriousness (7 items), Pap smear advantage and motivation (8 items), health motivation (3 items), and Pap smear obstacles (14 items). This scale was assessed using a 5-Likert type scaling of "I definitely disagree" (1), "I disagree" (2), "neutral" (3), "I agree" (4), "I fully agree" (5) method ranging from 1 to 5. Each dimension of the scale was separately assessed. Higher scores indicate stronger feelings about that the scale sense. All subscales are positively related to screening behavior except for the "barriers", which have a negative association.

Table 1: Characteristics of participants (n=266)

	n	%
Age		
30-35	88	33.1
36-40	64	24.1
41-45	62	23.3
46-50	28	10.5
51 and above	24	9.0
Marital status		
Married	218	82.0
Widow/divorced	48	18.0
Employment status		
Housewives	82	30.8
Employee/retired	184	69.2
Education level		
Primary school	150	56.4
High school	62	23.3
College/university	54	20.3
Number of children		
0	36	13.5
1-3	198	74.5
More than 3	32	12.0
Monthly income		
Below 500 Lira	73	27.4
500-1000 Lira	70	26.3
1001-1500 Lira	83	31.3
Above 1500 Lira	40	15.0
Age of first sexual intercourse		
≤20 years	131	49.2
>20 years	135	50.8
Previous Pap smear test		
Yes	157	59.0
No	109	41.0

RESULTS

The participants' (n=266) mean age was 40±8.10 (min:30--max:70 years of age). The largest group (33.1%) was between 30-35 years of age and married (82.0%). Characteristics of the participants given in Table 1.

The participants' mean age of menarche was 13.24±1.2 (min:10--max:18 years). Those with menarche age above 14 were the largest group (41.1%). The Mean age of first sexual intercourse was 21.67±4.5 (min:13--max:45 years). 86.5% reported a single partner, 13.5% more than one.

Regarding Pap smear test rating and sociodemographic characteristics such as in our study, no difference was found between, education level, and employment status ($p>0.05$).

Scores obtained by the participants from the Health Belief Model Scale subscales are shown in Table 2.

Forty-one percent of the participants (n=109) had never undergone a Pap smear test. Women who previously had a Pap smear test had high mean scores for the subscales of sensitivity, seriousness, advantage and motivation, and their health motivation mean scores for obstacle was low. Significant relations were detected between seriousness and health motivation from the Health Belief Model Scale subgroups and taking Pap smear tests ($p=0.021$, $p=0.006$) (Table 3).

Table 2: Participants' health belief model scale scores.

	Mean	SD*	Min.	Max.
Sensitivity	8.59	2.65	3	15
Seriousness	23.63	7.02	7	35
Advantage and motivation	29.43	7.73	9	45
Health motivation	11.33	3.36	3	15
Obstacles	36.35	12.33	14	70

*SD: Standard deviation

Table 3: Participants' health belief model scale scores undergoing pap smear test or not

Health Belief Model Scale	Taking Pap smear test		p
	Yes Mean±SD*	No Mean±SD*	
Sensitivity	9.01±2.56	7.99±2.67	0,216
Seriousness	24.50±6.61	22.37±7.43	**0.021**
Advantage and motivation	30.46±7.44	27.94±7.92	0.229
Health motivation	11.78±3.12	10.70±3.,60	**0.006**
Obstacles	32.95±11.77	35.17±10.82	0.128

*SD: Standard deviation

DISCUSSION

In studies conducted with different groups and different provinces in Turkey, Pap smear test rates were found to be generally low (16, 17, 20-22) and slightly lower than the ratio of 59.0% detected in our study. These findings show that the percentage of applications for regular Pap smear test is below the desired levels in our country, especially when compared to rates in developed countries. One of the reasons for this case may be the obstacle caused by religious and cultural values.

In studies in literature, it was found that income and education level, health insurance and health resources, knowledge level and cultural factors have significant importance on attitudes to Pap smear test (15, 16, 22-24). In our study, no difference was found between sociodemographic characteristics such as education level, employment status frequency of undergoing Pap smear test ($p>0.05$).

Another possible cause of the high proportion of women under 45 years: the similarity between the age groups in terms of smear neglect is perhaps because due to their relative youth and lack of risk perception. In addition, most of the participants were working people and generally with a lower education level. Education level may explain the lack of information about the importance of the issue, while women in employment may have difficulty in allocating time. Our study shows, in line with previous studies, that a common reason for ignoring an invitation for screening was lack of knowledge (16, 21, 25, 26).

According to the Health Belief Model, with increases in the positive perception of women regarding screening with Pap smear test, here are corresponding increases in sensitivity, seriousness, and health motivation (11). In our study, we determined that the mean scores of all sub-dimensions were at a medium level. However, no change was found in participants' sensitivity and seriousness perception ($p>0.05$). However, it was detected that women with high education levels have higher seriousness score levels ($p<0.05$), which contrasts with the results of studies done previously (15, 17, 20).

Demirgoz determined that attitudes to Pap smear test were influenced by views on gynaecological examination, sociodemographic characteristics, Pap smear knowledge and risk perceptions related to cervical cancer, but the test's importance was not generally well-understood. A significant relationship was found between the participants' status at work, educational level and awareness of Pap smear test, on one hand, and benefit /motivation, health motivation and disability perception on the other. "Seriousness perception", however, was not affected by any variable (15).

According to the level of knowledge of regarding Pap smear, when the conditions are examined; Akyuz found that those who knows "how Pap smear test is used for gynecological cancer diagnosis and how often it should be", did the test, and the difference between them was statistically significant (17).

According to Buyukkayaci, on the subject of perceived susceptibility, however, most women expressed the belief that they were not at risk, and that cervical cancer only appeared in women older than 50 (20).

According to the Health Belief Model, as the obstacle perception increases, negative health behavior increases correspondingly. Shame, uncertainty and fear are among the reasons why women fail to take the test. The obstacle perception detected in our study is similar to other Turkish studies (11, 15, 20, 21, 25).

Male practitioners applying the Pap smear test may be a significant obstacle, as one-third of the participants indicated a preference for a female doctor. Another factor that prevents application for the screening test is a feeling of being healthy. In the literature, it was observed that healthy women with no obvious symptoms tend to avoid the test (26). Only one-third of the participants in our study repeated regular health checks. Even in good general health a very common misperception was that "the test is necessary only in the presence of changes in bleeding and discharge", due perhaps, to a lack of knowledge about the issue. After eliminating this mis-

conception, every woman may understand the risks. This research was based on finding obstacles and identified that the interaction of social and personal barriers influenced women's behavior and attendance for screening. The main barriers were found to be insufficient health education of people, absence of patient-friendly health services, different cultural and social health beliefs, also gender roles and personal factors.

CONCLUSION

Women who do not take Pap smear test due to reticence should be supported and encouraged to develop positive healthy behavior. Motivational interviews and greater patient-centeredness in the family medicine discipline are potential solutions to the obstacles for cervical cancer screening provided by women's health services (27).

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